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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,731	12/15/2005	Takuya Sato	282365US90PCT	3732

  

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EXAMINER	
YOUNG, JANELLE N	

  

ART UNIT	PAPER NUMBER
2618	

  

NOTIFICATION DATE	DELIVERY MODE
01/31/2008	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/560,731	<b>Applicant(s)</b> SATO ET AL.	
	<b>Examiner</b> Janelle N. Young	<b>Art Unit</b> 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claim 1-9 have been considered but are moot in view of the new ground(s) of rejection.

Taketsugu teaches that the quality in a wireless line between the radio base station and mobile terminal varies with time dependent upon movement in the mobile terminal, influence of an obstacle, fading, and the like; which is interpreted as a type of cases that cause error (Page 4, Para 0056-0057 of Taketsugu). In order to determine fading, it is necessary to determine the channel quality. In addition, Taketsugu teaches the relationship of a quality and transmission speed by disclosing how a lower quality in a wireless line brings about the slower practical data transmission speed. Besides a larger amount of information for detecting errors and processing retransmission of signals is added to the wireless line than that of a wired line, so that a ratio of transmission capacity that can be utilized (Page 1, Para 0015 of Taketsugu).

In order to transmit data by a relay station or radio system controller one has to have a control channel. The relay station contains a plurality of base stations and controls the transmission of data packets (Fig. 2; Page 3, Para 0052-0053; and Page 4, Para 0061-0062 of Taketsugu). In order to transmit data between the base station and mobile terminal one has to have a user channel (Fig. 2; Page 3, Para 0049-0051 & 0054; and Page 4, Para 0061-0062 of Taketsugu). A received signal can be read on the

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controller receiving a signal from a base station and which can also be read as an signal received from the mobile station.

Taketsugu also discloses a transmission capacity demanding signal, which is requested to increase or decrease; which reads on updating, a permissible transmission capacity as a target (Page 4, Para 0058 of Taketsugu).

Taketsugu discloses: communicating unit configured to communicate, in a predetermined period, the updated target circuit qualities for the control channel and the user channel. (Page 4, Para 0055-0062).

Taketsugu discloses a target circuit quality determining unit configured to determine a target circuit quality for the received signal, based on the target circuit qualities for the control channel and the user channel communicated from the communicating unit, so that all of the control channel and the user channel satisfy a required channel quality (Abstract; Page 1, Para 0017-Page 2, Para 0023; and Page 2, Para 0034-Page 3, Para 0041).

Taketsugu discloses when the channel quality of the control channel satisfies a predetermined condition, the communicating unit is configured to communicate at least the target circuit quality for the control channel to the target circuit quality determining unit; and the target circuit quality determining unit is configured to determine the target circuit quality for the received signal, based on the communicated target circuit quality for the control channel (Abstract Page 2, Para 0034-Page 3, Para 0041 and).

***Response to Amendment***

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taketsugu (US Pub 2001/0050909) and further in view of Okumura (US Pub 2003/0003942).

As for claim 1, Taketsugu teaches a controller equipment comprising:

a measuring unit configured to measure channel qualities of a control channel and a user channel separated from a received signal (Abstract and Page 4, Para 0062-0063 of Taketsugu);

an updating unit configured to update target circuit qualities for the control channel and the user channel, based on results of measurement of the channel qualities by the measuring units unit (Page 2, Para 0033 and Page 4, Para 0059-0060 of Taketsugu);

a communicating unit configured to communicate, in a predetermined period, the updated target circuit qualities for the control channel and the user channel (Page 4, Para 0055-0062 of Taketsugu); and

a target circuit quality determining unit configured to determine a target circuit quality for the received signal, based on the target circuit qualities for the

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control channel and the user channel communicated from the communicating unit, so that all of the control channel and the user channel satisfy a required channel quality (Abstract; Page 1, Para 0017-Page 2, Para 0023; and Page 2, Para 0034-Page 3, Para 0041 of Taketsugu); wherein,

when the channel quality of the control channel satisfies a predetermined condition, the communicating unit is configured to communicate at least the target circuit quality for the control channel to the target circuit quality determining unit (Abstract and Page 2, Para 0034-Page 3, Para 0041).

However, Okumura a controller equipment comprising: a target circuit quality determining unit is configured to determine the target circuit quality for the received signal, based on the communicated target circuit quality for the control channel and user channel (Abstract; Page 1, Para 0004-0005; Page 2, Para 0021; and Page 5, Para 0066 of Okumura).

It would have been obvious to one of ordinary skill of the art at the time the invention was made to incorporate a transmit power control method and transmit power control system suitable to mobile communications, as taught by Okumura, in the controlling transmission capacity and mobile communication system of Taketsugu, because Taketsugu already teaches quality in a wireless line between the radio base station and the mobile terminal (Page 4, Para 0056, 0068, & 0073 of Taketsugu).

The motivation of this combination would reduce the deterioration of data receiving quality at the beginning of the data transmission, as taught by Okumura on Page 1, Para 0009. In addition, Taketsugu discloses that the data at a speed more than

a transmission speed in a wireless line does not flow there into, so that a buffer overflow due to deterioration of quality in the wireless line is prevented (Page 4, Para 0068 & 0073).

As for claim 2, Taketsugu teaches a controller equipment, wherein: the communicating unit is configured to compare the channel quality of the control channel with a predetermined threshold in a period shorter than the predetermined period, and to communicate the updated target circuit quality for the control channel to the target circuit quality determining unit based on a result of the comparison (Page 2, Para 0027-0032; Page 4, Para 0055-0058; and Page 4, Para 0064-0066).

As for claim 3, Taketsugu teaches a controller equipment, wherein: when the channel quality of the control channel satisfies a predetermined condition, the communicating unit is configured to communicate the target circuit qualities for the control channel and the user channel to the target circuit quality determining unit; and the target circuit quality determining unit is configured to determine the target circuit quality for the received signal, based on the communicated target circuit qualities for the control channel and the user channel (Abstract and Page 2, Para 0034-Page 3, Para 0041).

Regarding claim 4, see explanation as set forth regarding claim 1 (controller equipment claim) because the claimed method for controller equipment would perform the controller equipment steps.

Regarding claim 5, see explanation as set forth regarding claim 2 (controller equipment claim) because the claimed method for controller equipment would perform the controller equipment steps.

Regarding claim 6, see explanation as set forth regarding claim 3 (controller equipment claim) because the claimed method for controller equipment would perform the controller equipment steps.

Regarding claim 7, see explanation as set forth regarding claim 1 (controller equipment claim) because the claimed controller equipment means would perform the controller equipment steps.

Regarding claim 8, see explanation as set forth regarding claim 2 (controller equipment claim) because the claimed method for controller equipment means would perform the controller equipment steps.

Regarding claim 9, see explanation as set forth regarding claim 3 (controller equipment claim) because the claimed method for controller equipment means would perform the controller equipment steps.

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ida et al (US Pub 2002/0082036) discloses a mobile communications system, designed to enable the overall amount of power emitted to be kept down, provided with



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a mobile station location information generating unit for generating location information indicating a present location of a mobile station when transmitting a request for increasing the transmission power from the mobile station in the middle of handover with base transceiver stations, a base transceiver station location information generating unit for generating location information indicating a present location of the base transceiver stations, a base transceiver station specifying unit for specifying one base transceiver station nearest to the mobile station from said location information, and a transmission power control unit for instructing an increase of the transmission power in only the specified base transceiver station.

Okumura (US Pub 2003/0003942) discloses a transmit power control method and system used in radio communications between a transmitting station and a receiving station is provided. The method and system employ a so-called double closed-loop control technique, and target signal quality is updated so that data quality received at the receiving station satisfies prescribed target data quality. When data are transmitted discontinuously, first target signal quality updated immediately before an idle period is held, and second target signal quality higher than the first target signal quality is set when data transmission resumes immediately after the idle period. The transmit power of the transmitting station is regulated so that signal quality at the receiving station satisfies the second target signal quality when the data transmission resumes.

Okumura et al. (US Pub 2004/0005906) discloses a transmission power control device is provided that includes: a transmission loss calculator that calculates a transmission loss in the electric wave transmission path between a mobile station and

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each base station; and a transmission power control information determiner that determines which transmission power control information is to be used in a transmission power control operation at the mobile station, based on transmission power control information transmitted from each base station to the mobile station and the transmission loss in the transmission path between the mobile station and each base station calculated by the transmission loss calculator. This transmission power control device may further include an autonomous controller that increases transmission power from a current value in accordance with predetermined characteristics, regardless of transmission power control information from another communication device, when reception signal quality has become lower than a predetermined quality level. With this structure, after synchronization with a signal from the base station is established at the mobile station, the transmission power is controlled to increase from the initial value in accordance with the predetermined characteristics, regardless of the transmission power control information transmitted from the base station.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janelle N. Young whose telephone number is (571) 272-2836. The examiner can normally be reached on Monday through Friday: 10:00 am through 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JNY  
January 16, 2008

  
**NAY MAUNG**  
**SUPERVISORY PATENT EXAMINER**